# Delaware Electric Cooperative

# Renewable Resource Program

**Revised**

*For Grant Applications*

*Received on or after*

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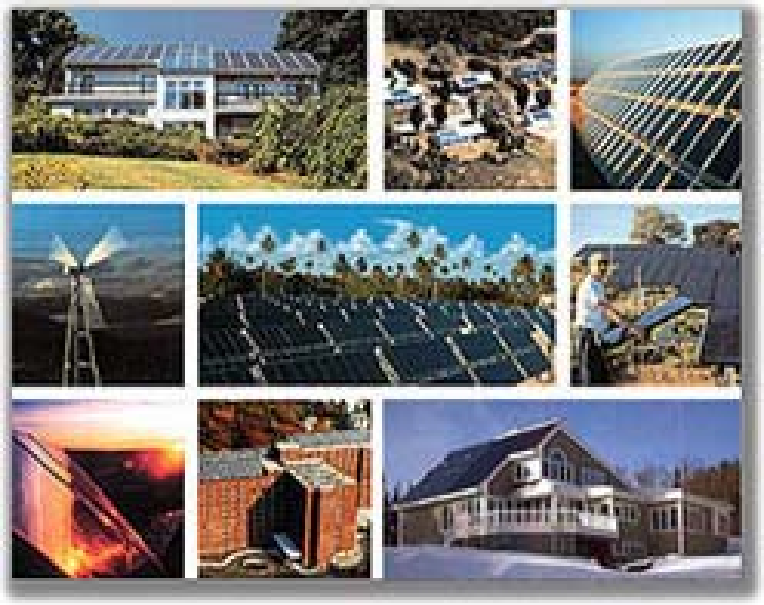

# Table of Contents


1.0 Purpose ..... 3
2.0 Definitions ..... 3
3.0 Renewable Resource Fund ..... 6
4.0 Renewable Resource Program ..... 6
4.1 General Provisions ..... 6
4.2 Eligibility ..... 6
4.3 Grant Reservation Request ..... 6
4.4 Evaluation of Grant Reservation Request ..... 7
4.5 Claim for and Distribution of Renewable Resource Program Grants ..... 8
4.6 Renewable Resource Program Participating Contractor Guidelines ..... 9
4.7 Warranty ..... 10
4.8 Code Compliance ..... 10
5.0 Renewable Energy Technologies ..... 10
5.1 Photovoltaic Systems ..... 10
5.2 Solar Water Heating ..... 12
5.3 Small Wind Turbines ..... 13
5.4 Fuel Cells ..... 15
6.0 Energy Efficiency Technology Program ..... 15
6.1 Geothermal Heat Pump Systems ..... 15
6.1.1 Grant Limits ..... 15
6.1.2 Accepted Products and Equipment ..... 16
6.1.3 Grant Application ..... 16
6.2 Lighting ..... 16
7.0 Demand Side Management Program ..... 17
7.1 General Provisions ..... 17
8.0 Severability ..... 17

## 1.0 Purpose

The purpose of this policy is to prescribe procedures relating to the Renewable Resource Fund pursuant to 26 Del. C. Chapter 1, Subchapter III-A, §363 the Delaware Renewable Energy Portfolio Standards. It is the goal in establishing this policy to provide a streamlined procedure for distributing Renewable Resource Funds through the use of grants.

This policy provides rules of practice and procedure for application and disbursement of Renewable Resource Fund grants to be used in support of energy efficiency technologies, renewable energy technologies, or demand side management programs for and by member-owners of Delaware Electric Cooperative.

## 2.0 Definitions

For purposes of this policy, the following words and phrases shall have the meanings set forth below.

**"Demand Side Management"** means a device or system(s) that provides for reducing, minimizing or controlling peak demands.

**"Department"** means the Department of Natural Resources & Environmental Control**,** the Delaware Energy Office, or such other agents as the department or Secretary of the Department may designate.

**"Energy Efficiency Improvement"** Means an increase in productivity or output for a given energy input when compared to convention technologies or practices. Energy efficiency improvements may include equipment replacement, installation of controls, changes in operating practices, or other measures.

**"Energy Efficiency Information Program"** or "Information Program" means a program established mainly to educate or inform energy consumers about the environmental and economic benefits of energy efficiency improvements. Energy efficiency information programs may include the demonstration of new technologies of the novel application of existing technologies in order to establish their environmental benefits.

**"Energy Efficiency Technology"** means a hardware device or system that provides an end-use energy service (e.g., lighting, heating, air conditioning, motion, etc.) using less energy per unit of output than minimum standards allow or available conventional equipment including but not limited to geothermal heat pumps and geothermal heat pump systems.

**"Budget Year"** means the calendar year, January 1 through December 31, for the Cooperative.

**"Freeze Tolerance Limit"** means the temperature below which a Qualifying System for Solar Water Heating might suffer damage attributable to freezing.

**"Fuel Cell"** is an electrochemical energy conversion device which converts the chemical energy from a fuel directly into electricity and heat.

**"Geothermal Heat Pump"** means either an open or closed loop system or direct expansion system that uses the thermal energy of the ground or groundwater as the heat source and heat sink for residential or non-residential space heating and/or cooling. It may provide both space heating and cooling, cooling only or heating only functions. A closed loop system consists of a ground heat exchanger in which the heat transfer fluid is permanently contained in a closed system. An open loop system consists of a ground heat exchanger in which the heat transfer fluid is part of a larger environment. A direct expansion system consists of a geothermal heat pump system in which the refrigerant is circulated in pipes buried in the ground, rather than using a heat transfer fluid, such as water or antifreeze solution in a separate closed loop, and fluid to refrigerant heat exchanger.

**"Grid-connected"**, "Grid-tied" or "Interconnected" means a condition in which a Qualifying System that is an electrical generating system serves and is electrically connected to an electrical load that is also connected to and served by the Cooperative electrical grid. The delivery or ability to deliver, any portion of the generating capacity into the utility electrical grid is not required, nor must the loads served be only alternating current loads. The Photovoltaic or Wind Turbine systems need only to be capable of serving electrical loads that would otherwise be served by the local utility.

**"Kilowatt"** means the basic unit of electric power equal to 1,000 Watts.

**"Kilowatt-hour"** means the basic unit of electric energy equal to one Kilowatt of power supplied to or taken from an electric circuit steadily for one hour. One-Kilowatt hour equals 1,000 Watt-hours. Electric energy is commonly sold by the Kilowatt-hour.

**"Nonresidential"** means all classes of member-owner purchasing electric power for uses other than for individual households. These groups of member-owners generally purchase electric power for commercial and industrial purposes. When used as an adjective with respect to Qualified Systems or Renewable Resource Program Grants, such term refers to systems owned by, or leased to, or grants awarded to Nonresidential persons.

**"Participating Contractor"** An appropriately Delaware licensed contractor who has submitted to the Department an application designated by the Department with all required attachments and maintains in full force all required insurance and warranties as described in Section 4.6.

**"Passive Solar Design"** A residential or non-residential building design that uses no external mechanical power, such as pumps or blowers, to collect and move solar heat.

**"Photovoltaic"** means a non-mechanical semiconductor device, most commonly made of silicon that produces direct current (dc) electricity from sunlight.

**"Placed in Service"** means installed, operational, and producing output.

**"Professional Engineer"** means "engineer", as defined in Title 24 Del. C., Chapter 28, *Professional Engineers,* namely, a person who by reason of his or her advanced knowledge of mathematics and the physical sciences, acquired by professional education and practical experience, is technically and legally qualified to practice Professional Engineering, and who is licensed by the Delaware Association of Professional Engineers.

**"Purchaser"** means the purchaser or lessee of a Qualifying System.

**"Qualifying System"** has the meaning as set forth in Section 4.3.2.

**"Renewable Fuel"** means a non-nuclear fuel that can be derived from non-fossil energy sources that are naturally replenishing and virtually inexhaustible.

**"Renewable Resource Fund"** means the fund established by 26 Del. C. Chapter 1, Subchapter III-A, §363(4).

**"Renewable Energy Technology"** or "alternative energy technology" means and includes any of the following machinery, equipment, or real property:

a. Hydroelectric generators, located at existing dams or in free-flowing waterways, and related devices for water supply and control, an converting, condition, and storing the electricity generated;
b. Wind equipment, required to capture an convert wind energy into electricity or mechanical power, and related devices for converting, condition and storing the electricity produced;
c. Solar energy equipment, and related devices necessary for collecting, storing, exchanging, condition or converting solar energy to other use for forms of energy;
d. Fuel cells and fuel cell systems; and
e. Biodiesel manufacturing facilities.

**"Residential"** means the class or classes of member-owners purchasing electric power for household uses. When used as an adjective with respect to Qualified Systems or Renewable Resource Program Grants, such term refers to systems owned by, or leased to, or grants awarded to Residential persons.

**"Retailer"** means the vendor or lessor of a Qualifying System.

**"Solar Pathfinder™"** is a non-electronic instrument that measures the annual solar potential for a given site.

**"Solar Shade Analysis"** means an on site evaluation using a Solar Pathfinder™ or functionally equivalent device that measures the annual solar potential for the given site.

**"Solar Water Heating"** means the heating of water by use of the sun's energy rather than electricity or gas or some other means.

**"State"** means the State of Delaware.

**"Ton of Capacity"** means 12,000 British Thermal Units (BTU) per hour of capacity.

**"Watt"** means the basic unit of measure of real electric power, or rate of doing work.

**"Watt-hour"** means the basic unit of measure of electric energy consumption. The total amount of energy used in one hour by a device that requires one Watt of power for continuous operation.

**"Wind Turbine"** means a mechanical/electrical system that converts the kinetic energy of blowing wind into mechanical or electric power.

## 3.0 Renewable Resource Fund

The Delaware 143rd General Assembly enacted and Governor Minner signed into law Senate Bill 74, which amended Title 26, Subchapter III-A, §363 of the Delaware Code to include provisions for the Cooperative to establish an independent, self-administered fund to be used in support of energy efficiency technologies, renewable energy technologies, or demand side management programs.

## 4.0 Renewable Resource Program

### 4.1 General Provisions

Funding is limited; all grants made under the Renewable Resource Program are on a first-come first-served basis. Under no circumstances will grants be issued for land acquisition in association with any project proposed in the Renewable Resource Program.

Total annual funds available to the Renewable Resource Program shall be allocated as follows: Energy Efficiency Technologies = 40%, Renewable Energy Technologies = 40%, Demand Side Management Programs = 20%. Any allocation of resources not utilized in any particular program may be transferred to one of the two remaining programs.

Of the total funds available through Renewable Resource Program on an annual basis, the grants made for residential projects shall not exceed 60% of the total funds available and the non-residential grants shall not exceed 40% of the total funds available. However any such funding not utilized by either residential or non-residential may be transferred to the other.

### 4.2 Eligibility

The Renewable Resource Program is available to member-owners of the Cooperative receiving distribution delivery and energy supply service from the Cooperative. All eligible equipment and products must be installed in Delaware on an active Cooperative electric account and used solely for the energy requirements of Cooperative member-owners.

Member-Owners of the Cooperative shall be permitted to install and receive grant monies for multiple qualifying projects but in no case shall the member-owner receive in excess of $15,000 in total grant monies per residential account and $30,000 per non-residential account.

### 4.3 Grant Reservation Request

Member-owners and contractors applying for grants of photovoltaic, solar water heating, wind, geothermal heat pump, or fuel cells must provide the following information to the Department prior to installing the system:

4.3.1 Completed Grant Reservation Form signed by both member-owner and contractor

4.3.2 The type of qualifying system

4.3.3 Copy of project estimate, purchase order, or letter of intent

4.3.4 Copy of the member-owner's recent DEC electric bill.

4.3.5 System schematic or line drawing

4.3.6 Plot plan illustrating well, turbine, or module location (wind and geothermal only, photovoltaic when system is ground mounted)

4.3.7 Manual J calculation (geothermal only)

4.3.8 Detailed system design and a predicted performance calculation verified by a Professional Engineer. (Non-residential solar water heating systems only.)

4.3.9 Roof diagram illustrating the following (solar water hearing and photovoltaic only):

4.3.9.1 Roof dimensions (angle, length and width)

4.3.9.2 Location of collectors or modules on roof

4.3.9.3 Location of any roof-mounted or building-mounted equipment

4.3.9.4 Orientation & Tilt of array or collectors

4.3.9.5 Areas of shading (Provide Solar Pathfinder results for all cases where shading occurs between 9:00 am and 3:00 pm. Results of the solar shad analysis must determine that 70% of the annual solar path's area is shade free to be considered for a grant).

4.4 Evaluation of Grant Reservation Request

Upon receipt of the Grant Reservation Request and supporting documents, the Department will perform an evaluation to check the proposal package for its compliance with the requirements noted above. If the proposal package is complete, the Department will process the Grant Reservation and issue a Confirmation and Claim Form to the applicant. All requirements as outlined in Section 4.3 must be provided to the Department prior to processing the grant reservation.

The Department will notify the Cooperative which will reserve the funds for the project described in the Grant Reservation Request for six (6) months from the date of the reservation for residential applicants and twelve (12) months from the date of reservation

for non-residential applicants. Since all grants are reserved on a first come-first served basis, viable projects that are not completed within the required time will be placed at the end of the queue and issued an extension of six (6) months from the date of the expired reservation for residential applicants and twelve (12) months from the date of expired reservation for non- residential applicants. To be considered for a reservation extension, the Department and the Cooperative will require a project status and summary in writing fourteen (14) business days prior to the expiration of the original reservation.

4.5 Claim for and Distribution of Renewable Resource Program Grants

After installation, the member-owner and contractor must provide the following to the Department:

4.5.1 Completed Confirmation and Claim form signed by member-owner and contractor

4.5.2 Copy of electrical, plumbing or building inspection

4.5.3 Copy of completed and approved DEC Interconnection Agreement (photovoltaic, wind, fuel cell).

4.5.4 Copy of product specification sheets

4.5.5 Copy of final sales invoice (invoice must include actual price paid, itemized list of components, labor, permit fees, method of payment)

4.5.6 Copy of warranty agreement

4.5.7 Copy of verification of completion of installation signed by member-owner and contractor.

Upon receipt of the completed Reservation Claim Form and all final documentation pertaining to the project as noted in Section 4.5.1-4.5.6, the Department will evaluate the Reservation and Claim Form and the required accompanying documents for consideration of grant approval. The contractor and member-owner are fully responsible for insuring that all forms and documentation have been supplied and the system meets all program requirements. The Department and/or the Cooperative may make an inspection of the systems prior to final grant approval.

The Department will process the grant within 30 days of receipt of the Reservation and Claim Form and all supporting documentation. The Department will provide the Cooperative with a determination that all grant requirements have been met. The Cooperative will ordinarily process the payment to the purchaser, however, if the purchaser so requests in writing and documentation reflects the grant value was reduced directly from the purchase price, the Cooperative will process the payment to the retailer or installing contractor.

Upon written request to the Department, and subject to Cooperative approval, the

Cooperative will pay the grant in two installments. Twenty-five percent 25% of the grant paid after the equipment is delivered to the installation site and all required permits, approvals, certifications from all jurisdictions having authority are secured. The remaining twenty-five percent is paid when the system is operational and approved by the utility and/or appropriate inspection agent. The Department and the Cooperative reserve the right to review any installation prior to any partial or final grant payment.

4.6 Renewable Resource Program Participating Contractor Guidelines

4.6.1 Participating Contractor Application

Contractors installing qualifying photovoltaic, solar water heating, geothermal heat pumps, small wind turbines, or fuel cells must complete the Participating Contractor Application prior to installing systems within the Renewable Resource Program. The application will consist of the following:

4.6.1.1 Name of company and key contact information

4.6.1.2 Brief history and organizational structure of company

4.6.1.3 Education, experience and licensure

4.6.1.4 General liability and statutory worker's compensation

4.6.1.5 Statement of reliability and good standing

4.6.2 Education and Licensure

Participating Contractors shall maintain appropriate education and licenses to insure that only professionally designed systems are installed within the Program. The Participating Contractor must be licensed in the State of Delaware.

Where industry certification programs have been promulgated, grant recipients are encouraged to use industry certified contractors.

4.6.3 Insurance Requirements

The Participating Contractor and anyone acting under its direction or control or on its behalf shall at its own expense procure and maintain in full force at all times Commercial General Liability Insurance with a bodily injury and property damage combined single limit of liability of at least ONE MILLION DOLLARS ($1,000,000) for any occurrence.

4.6.4 Statement of Reliability and Good Standing

Contractor must be reliable and in good standing with a "Satisfactory Record" (or no negative reports) with the Better Business Bureau. The Contractor shall provide a copy of their Better Business Bureau report to the Department upon request. Reports may be obtained at the following address.

BBB of Delaware
1415 Foulk Road, Suite 202

Foulkstone Plaza
Wilmington, DE 19803
Phone: (302)230-0108
Fax: (302)230-0116
Web Site: www.delaware.bbb.org
Email: info@delaware.bbb.org

4.6.5 Limitation of Funds

The Program funds are limited. The Participating Contractor shall follow program guidelines to insure reservation of funds prior to installing a qualifying system. If grant funds are not available for payment at the time of completion completed projects will be placed in a queue as DEC receives the final authorization from the Energy Office.

**NOTICE: As of November 1, 2008 completed projects in queue can expect a waiting period of approximately eighteen months before grants are paid out.**

4.6.6 Owner's Manual Minimum Requirements

Contractors are required to provide each Program participant with an owner's manual. At a minimum, the owner's manual shall include the following:

4.6.6.1 Name and address of the seller

4.6.6.2 System model name or number

4.6.6.3 Identification and explanation of system components

4.6.6.4 Description of system operation

4.6.6.5 Description of system maintenance

4.6.6.6 Description of emergency procedures

4.6.6.7 Vacation procedures

4.6.6.8 Systems warranty

4.7 Warranty

All qualifying systems receiving a Renewable Resource Program grant must have a full 5-year warranty against component failure, malfunction and premature output degradation. The warranty must cover all components for which the program incentive is granted and cover the full cost of repair and replacement of all components of the system. For professionally installed systems, the warranty must cover the labor to remove and replace defective components and systems.

4.8 Code Compliance

All qualifying systems must be installed in accordance with the standards and

specifications of the manufacturers of the components in the system, in compliance with all applicable local electric and building codes, local ordinances and these guidelines. Where discrepancies, if any, exist with these guidelines and local codes, local codes shall govern.

## 5.0 Renewable Energy Technologies

### 5.1 Photovoltaic Systems

#### 5.1.1 Grant Limits

Subject to availability of funds, the DEC Renewable Resource Program offers grants for grid-connected photovoltaic systems installed by qualified contractors and member-owners up to 33 1/3% of the total installed costs. Grants will not exceed $15,000 per residential dwelling for residential systems and $30,000 per non-residential facility for non-residential systems. A photovoltaic system may not have eligible qualifying photovoltaic system costs in excess of $12 per Watt.

#### 5.1.2 Accepted Products and Equipment

##### 5.1.2.1 Grid Interconnected

All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of the most recent version of Underwriters Laboratory Standard 1703.

All qualifying grid-connected systems must comply with the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 929, Recommended Practice for Utility Interface of Photovoltaic (PV) Systems, IEEE 1547, Standard for Interconnecting Distributed Resources with the Electric Power Systems and the appropriate generation interconnection requirements of the Cooperative's Technical Requirements for Parallel Operations.

All inverters must be certified by a nationally recognized testing laboratory for safe operation and be certified as meeting the requirements of Underwriters Laboratory Standards 1741, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems.

All grid interconnected systems must be designed and installed to comply with the National Electric Code (NEC).

##### 5.1.2.2 Non-Grid Interconnected or Stand-Alone

All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of the most recent version of Underwriters Laboratory Standard 1703.

All non-grid interconnected or stand-alone systems shall be designed and

installed to comply with the National Electric Code (NEC).

5.1.3 Array Orientation and Tilt

Optimum array orientation is a 180° true bearing. However, the program accepts solar arrays oriented between South of due East and South of due West or between 80° and 260° magnetic. Systems installed between 260° and 80° magnetic or North of due East and North of due West are not eligible for a Renewable Resource Program Grant.

Optimum array tilt is equal to the latitude at the installation site. However, the program accepts array tilt parameters as specified by the module manufacturer which may allow for tilts greater than and less than latitude.

5.1.4 Array Shading

Photovoltaic arrays shall be installed such that the array has a minimum of six (6) hours of unobstructed sunshine daily inclusive of solar noon. A "solar window" of eight (8) hours of unobstructed sunshine is preferred.

The installing contractor is responsible for insuring that the system is free from shading. The installing contractor shall perform a “Solar Shade Analysis” to ensure the array meets the minimum daily sunshine requirements. Results of the solar shade analysis must determine that 70% of the annual solar path’s area is shade free to be considered for a grant.

5.1.5 Aesthetics

Aesthetics must be considered in the design and mounting of the photovoltaic array. The designing contractor must provide a roof schematic complete with roof dimensions, array placement, orientation and areas of shading to the Department prior to installation. The designing contractor must make every attempt to configure the modules in an aesthetically pleasing manner free from shading.

5.2 Solar Water Heating

5.2.1 Grant Limits

Subject to availability of funds, the Renewable Resource Program offers grants for solar water heating systems installed by qualified contractors and member-owners up to 50% of the total installed cost. Grants will not exceed $3,000 per residential dwelling for residential systems and $10,000 per non-residential facility for non-residential systems.

Solar water heating systems integrated into a radiant heating application are eligible for a grant up to 50% of the installed cost of the solar energy portion of the system. Grants will not exceed $5,000 per residential dwelling for residential systems and $10,000 per non-residential dwelling for non-residential systems.

5.2.2 Accepted Products and Equipment

A solar water heating system must be designed to reduce or eliminate the need for electric or gas heated water.

All qualifying residential solar water heating systems must be certified to meet the Solar Rating and Certification Corporation's (SRCC) OG-300, Operating Guidelines and Minimum Standards for Certifying Solar Water Heating Systems: An Optional Solar Water Heating System Certification and Rating Program and have a Freeze Tolerance Limit of minus 21 degrees Fahrenheit without electrical power.

All qualifying non-residential solar water heating systems and solar energy systems integrated into a radiant heating application must utilize collectors certified to meet the Solar Rating and Certification Corporation's (SRCC) OG-100, Operating Guidelines for Certifying Solar Collectors.

Non-residential solar water heating systems will be required to submit a detailed system design and a predicted performance calculation verified by a Professional Engineer (P.E.)

5.2.3 Collector Orientation and Tilt

Optimum collector array orientation is a 180° true bearing. However, the program accepts solar collectors oriented between South of due East and South of due West or between 80° and 260° magnetic. Systems installed between 260° and 80° magnetic or North of due East and North of due West are not eligible for a Renewable Resource Program Grant.

Optimum collector tilt is equal to the latitude at the installation site. However, the program accepts collector tilt parameters as specified by the collector manufacturer which may allow for tilts greater than and less than latitude.

5.2.4 Collector Shading

All collectors shall be installed such that the collector array has a minimum of six (6) hours of unobstructed sunshine daily inclusive of solar noon. A "solar window" of eight (8) hours of unobstructed sunshine is preferred.

The installing contractor is responsible for insuring that the system is free from shading. The installing contractor shall perform a “Solar Shade Analysis” to ensure the array meets the minimum daily sunshine requirements. Results of the solar shade analysis must determine that 70% of the annual solar path’s area is shade free to be considered for a grant.

5.2.5 Aesthetics

Aesthetics must be considered in the design and mounting of the solar water heating collectors. The designing contractor must complete a roof schematic

complete with roof dimensions, collector placement, orientation and areas of shading to the Department prior to installation. The designing contractor must make every attempt to configure the collectors in an aesthetically pleasing manner.

## 5.3 Small Wind Turbines

### 5.3.1 Grant Limits

Subject to availability of funds, the DEC Renewable Resource Program offers incentives up to 33 1/3% of the total installed cost for small grid-connected wind turbines installed by a qualified contractor for a qualified member-owner. Small wind turbines shall be at least 500 Watts. Grants will not exceed $15,000 per residential dwelling for residential systems and $30,000 per non-residential facility for non-residential systems. A qualifying wind turbine system shall not exceed $5.00 per Watt installed.

### 5.3.2 Capacity Limits

Qualifying wind turbine systems shall be at least 500 Watts.

The Department may reject applications if the location of the proposed wind turbine system has an inadequate wind resource for reasonable utilization of the equipment as recommended by the turbine manufacturer. Wind resources can vary significantly; therefore, the contractor and member-owner must take care that the location has adequate wind for the turbine selected. It is strongly recommended that a professional evaluation of your specific site be completed. The Department may require additional evidence of feasibility prior to approving the grant reservation.

### 5.3.3 Accepted Products and Equipment

#### 5.3.3.1 Grid Interconnected

All qualifying grid-connected small wind systems must use Underwriters Laboratory listed equipment and comply with the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 929, Recommended Practice for Utility Interface of Photovoltaic (PV) Systems, IEEE 1547, Standard for Interconnecting Distributed Resources with the Electric Power Systems and the appropriate generation interconnection requirements of the Cooperative's Technical Requirements for Parallel Operation.

All inverters or other systems used in interconnection must be certified by a nationally recognized testing laboratory for safe operation and be certified as meeting the requirements of Underwriters Laboratory Standards 1741, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems.

All grid interconnected systems must be designed and installed to comply with the National Electric Code (NEC).

5.3.3.2 Non-Grid Interconnected or Stand-Alone

All qualifying non-grid interconnected wind systems must use Underwriters Laboratory certified listed equipment and systems shall be designed and installed to comply with the National Electric Code (NEC).

5.4 Fuel Cells

5.4.1 Grant Limits

Subject to availability of funds, the DEC Renewable Resource Program offers grants for grid-connected fuel cells installed by qualified contractors and member-owners up to 50% of the total installed cost for fuel cell systems operating on a renewable fuel source. Grants will not exceed $15,000 for residential systems and $30,000 for non-residential systems.

5.4.2 Accepted Products and Equipment

5.4.2.1 Grid Interconnected

All Qualifying fuel cells systems must utilize a renewable fuel source and meet the National Fire Protection Association (NFPA) 853 for Stationary Fuel Cell Power Plants, the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 519-Recommended Practices and Requirements for Harmonic Control in Electric Power Systems, the most current version of the American National Standards Institute (ANSI) Z21.83 for Fuel Cell Power Plants, and input and output protection functions should be in compliance with ANSI C37.2 Device Function Number Specifications.

All grid interconnected systems must be designed and installed to comply with the National Electric Code (NEC).

5.4.2.2 Non-Grid Interconnected or Stand-Alone

All non-grid interconnected or stand-alone systems shall be designed and installed to comply with the National Electric Code (NEC).

## 6.0 Energy Efficiency Technology Program

6.1 Geothermal Heat Pump Systems

6.1.1 Grant Limits

Subject to availability of funds, the DEC Renewable Resource Program offers grants for geothermal heat pump systems installed by qualified contractors and member-owners at the following rates:

Residential:
$600 per ton not exceeding $3,000 per residential dwelling for residential systems installed with an Energy Efficiency Ratio (EER) of 15.0 and Coefficient of Performance (COP) of 3.4 or greater or 50% of the installed cost whichever is lower, or $500 per ton not exceeding $2500 per residential dwelling for residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or 50% of the installed cost whichever is lower.

Non-residential:
$600 per ton not exceeding $20,000 per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 15.0 and Coefficient of Performance (COP) of 3.4 or greater or 50% of the installed cost whichever is lower, or $500 per ton not exceeding $20,000 per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or 50% of the installed cost whichever is lower.

6.1.2 Accepted Products and Equipment

Qualifying geothermal heat pump systems must be sized in accordance with good heating, ventilation and air conditioning design practices for the occupancy, location and structure. Contractor shall provide a Manual J calculation, or other equivalent calculation, to determine proper size of equipment.

All qualifying systems must have a warranty for protection of the integrity and performance of the system for at least five years. All units installed under this program must have a minimum EER of 14.0 and COP of 3.0. Qualifying systems must meet the following:

Closed loop systems shall qualify under rating conditions in accordance with ISO 13256-1.

Open loop systems shall qualify under rating conditions in accordance with ISO 13256-1.

DX systems shall qualify under rating conditions in accordance with ARI 870.

6.1.3 Grant Application

Application for grants of geothermal heat systems shall be made applicable to the provisions of 4.0.

6.2 Lighting

The Cooperative will evaluate lighting retrofits of non-residential accounts. Applications will be reviewed by the Cooperative and must contain a detailed quantification of cost savings.

The Cooperative will, from time to time, purchase efficient light bulbs to be distributed to

member-owners at annual meeting, civic events, etc.

## 7.0 Demand Side Management

7.1 General Provisions **(To be determined)**

## 8.0 Severability

If any section, subsection, paragraph, sentence, phrase or word of these policies is declared unconstitutional by a court of competent jurisdiction, the remainder of these policies shall remain unimpaired and shall continue in full force and effect, and proceedings there under shall not be affected.